

Water Conservation Using Greywater

FACT SHEET



Wastewater Management
Program

Summer 2001

Why conserve water?

Conserving our water resources is important in times of normal rainfall, but even more so during periods of extended drought. Our ground water and surface water supplies can be emptied faster than they can be refilled with rain and snowmelt. By using water wisely now, you help to ensure that there will be enough water for everyone in the future.

If handled carefully, greywater can be used in place of fresh water in **subsurface irrigation** systems. However, using less water in the first place is cheaper, easier, and safer than installing a greywater system for irrigating your landscape, and...it's something everyone can do!

What is greywater? Greywater is wastewater from bathtubs, showers, bathroom sinks, washing machines, dishwashers and kitchen sinks: any source in your home other than toilets.

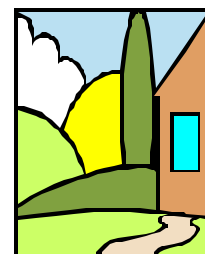
It is important to understand that greywater can contain harmful bacteria, viruses, and chemicals that pose a risk to public health and the environment if mishandled.



What's in Greywater?

Greywater Source	Characteristics*
Clothes Washer.....	Bacteria, bleach, foam, high pH, hot water, nitrates, oil and grease, salinity, soaps, sodium and suspended solids
Bathtub and Shower...	Bacteria, hair, hot water, odor, oil and grease, soaps, and suspended solids
Sinks.....	Bacteria, food particles, hot water, odor, oil and grease, organic matter, soaps, and suspended solids

* These characteristics make it necessary to properly treat greywater.



Source: Adapted from Small Flows Quarterly, Winter 2001, Volume 2, Number 1

Did You Know.....?

- Greywater makes up the largest portion of wastewater from your home...up to 40 gallons per person each day.
- Greywater systems **must irrigate below the ground surface** by using a drainfield or a suitable drip irrigation system to reduce health risks.
- Greywater systems are usually cheaper and easier to install during construction of a new home. Re-plumbing an existing building can be expensive and may be impractical.

Subsurface irrigation with greywater offers a way to conserve water. However, greywater may not meet all of your landscape irrigation needs all year round.

- Some times of the year, your plants may need more water than can be supplied by greywater irrigation.....other times of the year, your home may generate more greywater than your plants can use.
- Some chemicals in greywater can be harmful to plants. (For information about suitable plants for greywater, please see *Water Conserving On-Site Wastewater Treatment Systems* at: <http://www.doh.wa.gov/ehp/ts/WTRCON7Fr.PDF>).

Greywater Fact Sheet

How can using greywater for irrigation help me conserve water?

- Greywater collected from sinks, tubs, showers, and clothes washing can be used in place of fresh water to irrigate trees, shrubs, and flowers.
- Sub-surface irrigation can place this water source where your landscape plants need it...at the root zone.



What else can I do to conserve water?

- Install low-flow water fixtures and water efficient appliances.
- Repair leaky plumbing fixtures.
- Take shorter showers.
- Choose landscaping that does not require large amounts of water.
- Water landscapes before 10 AM or after 7 PM.



How do I safely install and use a greywater irrigation system?

1 **Contact** your county health agency for:

- Wastewater Treatment System permits (greywater is wastewater),
- Design requirements,
- A list of qualified Designers and Installers.

2 **Develop** a design that matches your specific needs and options for greywater use. The design of the system will depend on:

- The source and characteristics of the greywater,
- The physical characteristics of the site,
- Local code requirements,
- How, when, and where the greywater will be used.

3 **Apply** greywater safely by:

- Irrigating with greywater below the surface of the ground,
- Irrigating ornamental landscapes such as shrubs, trees, and flowers,
- Regularly checking your greywater system to be sure it is functioning properly.

For your safety and the safety of others.....

DO NOT drink greywater or apply it on anything that may be eaten.

DO NOT water lawns with greywater using a sprinkler, or use greywater to wash patios, walkways or driveways.

Where can I find more information?

- Water Conservation information is available at the Washington State Department of Health, Division of Drinking Water website at: http://www.doh.wa.gov/ehp/dw/Our_Main_Pages/drought.htm.
- For information about on-site wastewater treatment systems (septic systems), please visit the Washington State Department of Health, Wastewater Management Section web page at: <http://www.doh.wa.gov/ehp/ts/waste.htm>
- The National Small Flows Clearinghouse provides information on small community and individual on-site sewage systems at: <http://www.nsfc.wvu.edu> .

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